SAT Report for Case # P-18-0261

General

[redacted]

Report Status:	Complete	**Status Date:**	11/19/2018		
CRSS Date:	08/06/2018	**SAT Date:**	08/07/2018	**SAT Chair:**	Rebecca Daiss
Consolidated PMN?	N				
Consolidated Set:					
Submitter:	[redacted]				
CAS Number:	None				
Ecotox Related Cases:	[redacted]				
Health Related Cases:	[redacted]				
Chemical Name:	[redacted]				
Use:	[redacted] All analogs are from this same submitter and are for similar uses.				
Trade name:	[redacted]				
PV Max (kg/yr):	[redacted]				
Ecotox Assessor:	Kim, Anne	**Fate Assessor:**	Wong, Edmund	**Health Assessor:**	Salazar, Keith

Physical Chemical Information

Molecular Weight:	[redacted]	**Physical State - Neat:**	[redacted]		
Percent 500:	[redacted]	**Percent 1000:**	[redacted]		
Melting Point (Measured):		**Melting Point (est):**		**MPD (EPI):**	
Vapor Pressure:		**Vapor Pressure (est):**	<0.000001	**VP (EPI):**	
Water Solubility:		**Water Solubility (EST):**	<0.000001/Reacts	**Water Solubility (EPI):**	
Log Kow:				**Log Kow (EPI):**	
Log P:		**Log P Comment:**			

SAT Concern

Ecotox Rating (1):	1	**Ecotox Rating Comment (1):**	
Ecotox Rating (2):		**Ecotox Rating Comment (2):**	
Health Rating (1):	1-2	**Health Rating Comment (1):**	
Health Rating (2):		**Health Rating Comment (2):**	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments
1-2	1	1	PMN
2	1	1	

Persistence	Bioaccumulation	Toxicity	Comments
3	*	1	Hyd Pdt [redacted] Hyd Pdt [redacted] B*(low)

Exposure Based Review (Health)?	
Exposure Based Review (Ecotox)?	N
SAT Keywords:	LUNG

Fate Assessment Summary: P-18-0261 FATE: [redacted]

S =
Reacts
Hydrolysis half-life = wk
VP < 1.0E-6 torr at 25 °C
(E)
BP > 400 °C (E)
H < 1.00E-8 (E)
POTW removal (%) = PMN
90 via sorption and hydrolysis; then Hyd Pdt [redacted] 90 via

sorption and biodeg; Hyd Pdt [redacted] 90 via sorption.
Time for
complete ultimate aerobic biodeg = PMN mo; Hyd Pdt [redacted] wk;

Hyd Pdt [redacted] > mo
Sorption to soils/sediments = PMN strong;
Hyd Pdt [redacted]
Hyd Pdt [redacted]
PBT
Potential: PMN P1-2B1; Hyd Pdt [redacted] P2B1;Hyd Pdt [redacted] P3B*(low)
*CEB FATE: Migration to ground water = PMN slow; Hyd Pdt [redacted] slow;
Hyd Pdt [redacted] slow

PMN
Material:
Overall wastewater treatment removal is 90% via sorption and slow hydrolysis (hydrolysis half-life: weeks).
Sorption to sludge is strong based on data for large molecular weight polymers.
Air Stripping (Volatilization to air) is negligible based on data for large molecular weight polymers.
Removal by biodegradation in wastewater treatment is negligible based on data for large molecular weight polymers.
The aerobic aquatic biodegradation half-life is weeks to greater than months based on data for large molecular weight polymers.
The anaerobic aquatic biodegradation half-life is weeks to greater than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater than or equal to the aerobic biodegradation half-life.
Sorption to soil and sediment is strong based on data for large molecular weight polymers.
Migration to groundwater is slow based on data for large molecular weight polymers.

PMN Material:
Low to Moderate Persistence (P1-2) is based on the slow hydrolysis (hydrolysis half-life: weeks) and data for large molecular weight polymers.
Low Bioaccumulation potential (B1) is based on the slow hydrolysis (hydrolysis half-life: weeks).
Hydrolysis Product ([redacted]
Overall wastewater treatment removal is 90% via biodegradation.
Sorption to sludge is strong based on data for [redacted] and similar cases of [redacted] degradants.
Air Stripping (Volatilization to air) is negligible based on data for [redacted] and similar cases of [redacted] degradants.
Removal by biodegradation in wastewater treatment is high based on data for [redacted] and similar cases of [redacted] degradants.
The aerobic aquatic biodegradation half-life is weeks based on data for [redacted] and similar cases of [redacted] degradants.
The anaerobic aquatic biodegradation

half-life is months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is strong based on data for [redacted] and similar cases of [redacted] degradants.
Migration to groundwater is slow based on data for [redacted] and similar cases of [redacted] degradants.
Hydrolysis Product ([redacted]
Moderate Persistence (P2) is based on the estimated anaerobic biodegradation half-life and data for [redacted].
Low Bioaccumulation potential (B1) is based on data for [redacted] in addition to metabolism.
Hydrolysis Product [redacted]:
Overall wastewater treatment removal is 90% via sorption.

Sorption to sludge is strong based on data for metal oxides
Air Stripping (Volatilization to air) is negligible based on data for metal oxides
Removal by biodegradation in wastewater treatment is negligible based on data for metal oxides
The aerobic aquatic biodegradation half-life is greater than months based on data for metal oxides
The anaerobic aquatic biodegradation half-life is greater than months based on the aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is strong based on data for metal oxides
Migration to groundwater is slow based on data for metal oxides

Hydrolysis Product [redacted]):
High Persistence (P3) is based on the estimated anaerobic biodegradation half-life and data for metal oxides.
Bioaccumulation potential (B*-low) is based on data for metal oxides. The substance does not fit in the standard framework of the model.
Bioconcentration/Bioaccumulation factor to be put into E-Fast:

N/A.

Removal in WWT/POTW (Overall): 90;90;90 PMN;Hyd Pdt [redacted] Hyd Pdt [redacted]

Condition	Rating Values w/ Rating Description	Comment
WWT/POTW Sorption:	3;3;3	PMN;Hyd Pdt [redacted] Hyd Pdt [redacted]
WWT/POTW Stripping:	4;4;4	PMN;Hyd Pdt [redacted] Hyd Pdt [redacted]
Biodegradation Removal:	4;2;4	PMN;Hyd Pdt [redacted] Hyd Pdt [redacted]
Biodegradation Destruction:		
Aerobic Biodeg Ult:	3;2;4	PMN;Hyd Pdt [redacted] Hyd Pdt [redacted]
Aerobic Biodeg Prim:		
Anaerobic Biodeg Ult:	3;3;4	PMN;Hyd Pdt [redacted] Hyd Pdt [redacted]
Anaerobic Biodeg Prim:		
Hydrolysis (t1/2 at pH 7,25C) A:	3.5	[redacted]
Hydrolysis (t1/2 at pH 7,25C) B:		
Sorption to Soils/Sediments:	2;2;2	PMN;Hyd Pdt [redacted] Hyd Pdt [redacted]
Migration to Ground Water:	2;2;2	PMN;Hyd Pdt [redacted] Hyd Pdt [redacted]
Photolysis A, Direct:		
Photolysis B, Indirect:		
Atmospheric Ox A, OH:		
Atmospheric Ox B, O3:		

Health Assessment

Health Summary:	Expect poor to nil absorption via all routes (pchem). Concern for lung toxicity if inhaled based on lung overload for respirable, poorly soluble particulates.
Routes of Exposure:	Inhalation

Test Data Submitted

Test Data Submitted:	

Ecotox Assessment

Test organism	Test Type	Test Endpoint	Predicted	Measured	Comments
Fish	96-h	LC50	*		
Daphnid	48-h	LC50	*		
Green Algae	96-h	EC50	*		
Fish	-	Chronic Value	*		
Daphnid	-	Chronic Value	*		
Green Algae	-	Chronic Value	*		

Factors	Most Sensitive Endpoint	Assessment Factor	CoC	Comment
Acute Acquatic:		5	*	
Chronic Acquatic:		10	*	

Ecotox Route of Exposure?	No releases to water

Factors	Values	Comments
SARs:	Nonionic Polymers	
SAR Class:	[redacted]	
TSCA NCC Category?	None	

Recommended Testing

None.

Ecotox Value Comments

Predictions are based on SARs for nonionic polymers (insoluble); [redacted] with a an unknown MP (P); S = negligible (P), reacts slowly (M); effective concentrations based on 100% active ingredients and mean measured concentrations; hardness <150 mg/L as CaCO3; and TOC <2.0 mg/L.

Ecotox Factors

Comments

Environment Hazard: Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risks because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA estimated environmental hazard of this new chemical substance using hazard data on analogous chemicals. Based on these hazard values, EPA concludes that this chemical substance has low environmental hazard.

• Substance does not fall within a TSCA New Chemicals Category.
• SAR chemical class of Nonionic Polymers-insoluble.
• PMN and LMW fraction [redacted] low hazard based on acute and chronic COCs no effects at saturation.

Environmental Risk:

• Risks were not identified for ecotoxicity.